

WHAT IS CLAIMED IS:

1. An electroplating solution for the deposition of silver; said solution comprising silver in the form of a complex of silver with hydantoin or a substituted hydantoin compound; said solution also comprising an excess of the hydantoin or substituted hydantoin compound, together with an effective quantity of a nonprecipitating electrolyte salt, and also an effective quantity of 2,2' dipyridyl for the purpose of obtaining a mirror-bright to brilliant deposit.

2. The electroplating solution of Claim 1, further comprising an effective quantity of a pyridine or substituted pyridine compound for the purpose of improving the overall brightness of the deposit obtained.

3. The electroplating solution of Claim 1 or 2, further comprising an effective quantity of surface-active material for the purpose of further improving the overall brightness and brilliance of the deposit obtained.

4. The electroplating solution of Claim 3, wherein the surface-active material is selected from the group consisting of Hamposyl C, Hamposyl L, Hamposyl O, Blancol, Blancol N, Rhodacal, and Rhodacal N.

5. The electroplating solution of Claims 1 or 2, wherein the pyridine or substituted pyridine compound is selected from the group consisting of nicotinamide, isonicotinamide, 2-aminopyridine, 3-aminopyridine, nicotinic acid and its salts, and isonicotinic acid and its salts.

6. The electroplating solution of Claim 4, wherein the surface-active material is selected from the group consisting of Hamposyl C, Hamposyl L, Hamposyl O, Blancol, Blancol N, Rhodacal, and Rhodacal N.

7. The electroplating solution of Claim 1 or 2, wherein the nonprecipitating electrolyte salt is selected from the group consisting of the salts of sulfamic, hydrofluoric, nitric, fluoboric, glycolic, and lactic acids.

8. The electroplating solution of Claim 3, wherein the nonprecipitating electrolyte salt is selected from the group consisting of the salts of sulfamic, hydrofluoric, nitric, fluoboric, glycolic, and lactic acids.

9. The electroplating solution of Claim 4, wherein the nonprecipitating electrolyte salt is selected from the group consisting of the salts of sulfamic, hydrofluoric, nitric, fluoboric, glycolic, and lactic acids.

10. The electroplating solution of Claim 5, wherein the nonprecipitating electrolyte salt is selected from the group consisting of the salts of sulfamic, hydrofluoric, nitric, fluoboric, glycolic, and lactic acids.

11. The electroplating solution of Claim 6, wherein the nonprecipitating electrolyte salt is selected from the group consisting of the salts of sulfamic, hydrofluoric, nitric, fluoboric, glycolic, and lactic acids.

12. A process for the formation of a mirror-bright to brilliant electrodeposit of silver on a substrate comprising the step of:

electroplating said substrate in an electroplating solution,

said solution comprising silver in the form of a complex of silver with hydantoin or a substituted hydantoin compound;

said solution also comprising an excess of the hydantoin or substituted hydantoin compound, together with an effective quantity of a nonprecipitating electrolyte salt, and an effective quantity of 2,2' dipyridyl for the formation of a mirror-bright to brilliant deposit.

13. The process of Claim 12, wherein the electroplating solution further comprises an effective quantity of a pyridine or substituted pyridine compound for the purpose of improving the overall brightness of the deposit obtained.

14. The process of Claim 12 or 13, wherein the electroplating solution further comprises an effective quantity of surface-active material for the purpose of further improving the overall brightness and brilliance of the deposit obtained.

15. The process of Claim 14, wherein the surface-active material is selected from the group consisting of Hamposyl C, Hamposyl L, Hamposyl O, Blancol, Blancol N, Rhodacal, and Rhodacal N.

16. The process of Claim 13, wherein the pyridine or substituted pyridine compound is selected from the group consisting of nicotinamide, isonicotinamide, 2-aminopyridine, 3-aminopyridine, nicotinic acid and its salts, and isonicotinic acid and its salts.

17. The process of Claim 16, wherein the surface-active material is selected from the group consisting of Hamposyl C, Hamposyl L, Hamposyl O, Blancol, Blancol N, Rhodacal, and Rhodacal N.

18. The process of Claim 12 or 13, wherein the nonprecipitating electrolyte salt is selected from the group consisting of the salts of sulfamic, hydrofluoric, nitric, fluoboric, glycolic, and lactic acids.

19. The process of Claim 14, wherein the nonprecipitating electrolyte salt is selected from the group consisting of the salts of sulfamic, hydrofluoric, nitric, fluoboric, glycolic, and lactic acids.

20. The electroplating solution of Claim 15, wherein the nonprecipitating electrolyte salt is selected from the group consisting of the salts of sulfamic, hydrofluoric, nitric, fluoboric, glycolic, and lactic acids.

21. The electroplating solution of Claim 16, wherein the nonprecipitating electrolyte salt is selected from the group consisting of the salts of sulfamic, hydrofluoric, nitric, fluoboric, glycolic, and lactic acids.

22. The electroplating solution of Claim 17, wherein the nonprecipitating electrolyte salt is selected from the group consisting of the salts of sulfamic, hydrofluoric, nitric, fluoboric, glycolic, and lactic acids.